# Introduction to Open Source Intelligence

## Course Objective

1. Foundation and core competency skills necessary for Open Source Intelligence
2. Raise searching capability level

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## Topics

Lesson 1 - Open Source Definitions and History
Lesson 2 - Open Source Issues
Lesson 3 - Forms of Open Source Information
Lesson 4 - Just How Much is Out There?
Lesson 5 – Who's Using Open Source Information?
Lesson 6 - Intelligence Process
- Analytical Standards

Lesson 7 - Ethics
- Ethical Issues

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## Objective

Provide an overview of Open Source Intelligence (OSINT)

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# Lesson 1

## Open Source Definitions and History

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## Open Source and Publicly Available Information

"Open Source Information: **Publicly available information** that anyone can lawfully obtain by request, purchase, or observation."

Source: ICD 301

"Open source is any person or group that provides **information without the expectation of privacy**–– the information, the relationship, or both is not protected against public disclosure."

Source: Intelligence. Army Field Manual 2.0. March 2010.1-3.

"**Publicly available information** is data, facts, instructions, or other material published or broadcast for general public consumption; available on request to a member of the general public; lawfully seen or heard by any casual observer; or made available at a meeting open to the general public."

Source: Intelligence. Army Field Manual 2.0. March 2010

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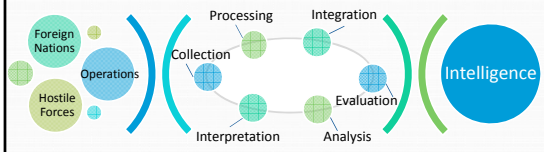
# Intelligence

"Intelligence is the product resulting from the collection, processing, integration, evaluation, analysis, and interpretation of available information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential operations. The term is also applied to the activity that results in the product and to the organizations engaged in such activity."

Source: Intelligence. Army Field Manual 2.0. March 2010

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# Open Source Intelligence

"Open Source Intelligence (OSINT) is intelligence that is produced from publicly available information and is collected, exploited, and disseminated in a timely manner to an appropriate audience for the purpose of addressing a specific intelligence requirement."

Source: National Defense Authorization Act for Fiscal Year 2006. Public Law 109-163.
Source: ICD 301

"Open-source intelligence is the discipline that pertains to intelligence produced from publicly available information that is collected, exploited, and disseminated in a timely manner to an appropriate audience for the purpose of addressing a specific intelligence requirement. Open-source intelligence (OSINT) is derived from the systematic collection, processing, and analysis of publicly available, relevant information in response to intelligence requirements."

Source: Intelligence. Army Field Manual 2.0. March 2010. 11-1.

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# Competitive Intelligence

"CI is a necessary, ethical business discipline for decision making based on understanding the competitive environment."

Strategic and Competitive Intelligence Professionals (SCIP)

"A broad definition of competitive intelligence is the action of defining, gathering, analyzing, and distributing intelligence about products, customers, competitors and any aspect of the environment needed to support executives and managers in making strategic decisions for an organization."

Wikipedia

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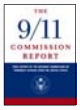
# History




**The 9/11 Commission Report (2004) recommended:**

- Establishment of a National Intelligence Director
- Establishment of an Open Source Agency

**Creation of the DNI Open Source Center (Nov. 2005)**

- Advance the Intelligence Community's exploitation of openly available information to include: Internet, databases, press, radio, television, video, geospatial data, photos, commercial imagery
- Includes collection, analysis and research, training and information technology management to facilitate government-wide access and use…
- Built on established expertise of the CIA's Foreign Broadcast Information Service (FBIS), which provided a broad range of highly valued products and services since 1941

Source: ODNI Announces Establishment of Ope
n Source Center, November 8, 2005.
Available at www.dni.gov/press_releases/20051108_release.htm

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# Intelligence Community

"A federation of Executive Branch agencies and organizations that work separately and together to conduct intelligence activities necessary for the conduct of foreign relations and the protection of U.S. national security. These organizations are (in alphabetical order)…"

- Air Force Intelligence
- Army Intelligence
- Central Intelligence Agency
- Coast Guard
- Defense Intelligence Agency
- Department of Defense
- Department of Energy
- Department of Justice
- Department of Homeland Security
- Department of State
- Department of the Treasury
- Office of the Director of National Intelligence
- Drug Enforcement Administration
- Federal Bureau of Investigation
- Marine Corps Intelligence
- National Geospatial-Intelligence Agency
- National Reconnaissance Office
- National Security Agency
- Navy Intelligence

Source: U.S. Office of the Director of Intelligence.
U.S. National Intelligence: An Overview 2011. January 2012.
Available at www.hsdl.org/?view&did=697740

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## Intelligence Disciplines

- All-source intelligence
- Counterintelligence (CI)
- Human intelligence (HUMINT)
- Geospatial intelligence (GEOINT)
- Measurement and signature intellig (MASINT)
- Open Source Intelligence (OSINT)
- Signals intelligence (SIGINT)
- Technical intelligence (TECHINT)

Source: Intelligence. Army Field Manual 2.0. March 2010

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## Intelligence

**Characteristics of Effective Intelligence**

- Accurate
- Timely
- Usable
- Complete
- Precise
- Reliable
- Relevant
- Predictive
- Tailored

Source: Intelligence. Army Field Manual 2.0. March 2010

**Attributes of Good Intelligence**

- Objectivity
- Relevance
- Accuracy
- Precision
- Completeness
- Usability
- Availability
- Anticipation

Source: Joint and National Intelligence Support to Military Operations. Joint Publication 2-01. January 5, 2012.

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# Lesson 2

## Open Source

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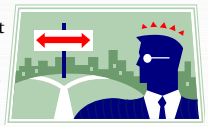
## Open Source Fundamentals

- Integral to intelligence operations
- Forms the basis of intelligence operations and products
- Supports intelligence, surveillance, and reconnaissance efforts
- Provides foundational information that enhances collection and production
- OSINT ensures decision makers that they have the benefit of all available information
- Open sources broadcast, publish, or distribute unclassified information for public use
- OSINT uses collection means or techniques for gathering publicly available information from these sources that are not intrusive



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## Open Source Characteristics

- Provides the Foundation
- Answers Requirements
- Enhances Collection
- Enhances Production

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## Open Source Considerations

## Compliance

**Main Compliance Agencies**

- Office of the Director of National Intelligence
- Office of General Counsel

Intelligence Community Legal Reference Book (contains most of these laws and policies)

- **The Freedom of Information Act**
  - full or partial disclosure of government information that is not held confidential
  - defines agency records subject to disclosure
  - outlines mandatory disclosure procedures
- **The Privacy Act of 1974**
  - governs the collection, maintenance, use, and dissemination of information about individuals - maintained in systems of records by federal agencies

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## Compliance

**In addition to compliance with the applicable laws and Executive Orders, the following must be ensured:**

- Civil liberties and the privacy of U.S. citizens and lawful U.S. residents
- Confidentiality of sources and identities of intelligence community personnel and the protection of privileged information
- Appropriate conduct of intelligence community personnel and activities

**Limitations**

- Compliance laws and policies, Department of Defense Directives, and other regulations may govern contact with and collection of information from open sources

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## Compliance

- **Operations Security (OPSEC) is a process and methodology**
- "As a process it identifies critical information to determine if friendly actions can be observed by adversary intelligence systems
- Determines if information obtained by adversaries could be interpreted to be useful to them, and
- Executes selected measures that eliminate or reduce adversary exploitation of friendly critical information.
- As a methodology it denies critical information to an adversary. Unlike security programs that seek to protect classified information, OPSEC measures identify, control, and protect generally unclassified evidence that is associated with sensitive operations and activities."

(Source: Joint Publications JP 3-13.3, Operations Security, (http://www.bits.de/NRANEU/others/jp-doctrine/jp3_13_3(06).pdf)

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## Compliance

**Deception and Bias**

- "It is important to know the background of open sources and the purpose of public information in order to distinguish objective, factual information from information that lacks merit, contains bias, or is part of an effort to deceive the reader."

**Intellectual Property**

- Patents
- Trademarks
- Copyright

Source: FMI 2-22.9. 2-10

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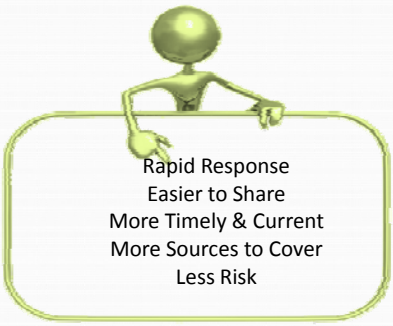
## Open Source Advantages

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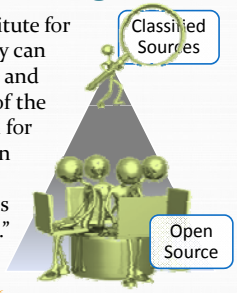
## Open Source Advantages

"Open sources are not a substitute for classified capabilities, but they can provide a valuable foundation and context for rapid orientation of the analyst and the consumer and for the establishment of collection requirements which take full advantage of the unique access provided by classified sources."




Source: Joint Publication 3-07.2. Antiterrorism. April 14, 2006. Available at www.scribd.com/doc/33335010/JCS-Antiterrorism-06

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## Open Source Disadvantages

- Volume
- Reliability unknown
- Not everything is out there in the open….

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# Lesson 3

## Forms of Open Source Information

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## Traditional Media, Commercial Content

**Traditional Media**

- Print (increasingly available in electronic format)
- Television
- Radio

**Commercial Content**

- Many Internet Sites (companies, services, products)
- Fee-based services and products
- Commercial research services
- Academia

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## Grey Literature (Gray Literature, Greylit, Hidden or Invisible or Deep Web)

Simply, Grey Literature is generally not available through normal channels or systems of publication or distribution.

**Examples:**

- Technical reports
- Conference papers
- Dissertations
- Working papers
- Technical manuals

**Produced by:**

- Author's sponsor or employer
- Educational researchers
- Government organizations
- Individuals
- Research laboratories/facilities
- Educational institutions

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## Government Agencies, Corporations

**Government Agencies**

- Maps
- Directories
- Demographic data
- Economic data
- Facility data
- Organizational capabilities

**Corporations**

Data which is often not designed for public distribution but is available for the asking such as:

- Annual Reports
- Facilities
- Maps
- Research
- Product fact sheets

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## Individuals, Internet

**Individuals**

- Pamphlets
- Posters
- Graffiti
- Public Meetings
- Speeches
- Publications – print, electronic

**Internet**

- Static HTML WWW pages
- Dynamic WWW pages and databases – the "deep web"
- Online communities
- Chat
- Podcasts
- Video

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# Lesson 4

## Just How Much is Out There?

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## Just How Much Is Out There?

As of Dec 2010

As of December 2010:

- **255 million web sites**
- 21.4 million web sites were added in 2010
- 88.8 million .COM domain names
- 13.2 million .NET domain names
- 8.6 million .ORG domain names
- 152 million blogs on the Internet

Source: Pingdom. Internet 2010 in Numbers. January 12, 2011. http://royal.pingdom.com/2011/01/12/internet-2010-in-numbers/

As of January 12, 2009:

- **URL's in Google's index ≈ 1 trillion**
- **Google searches ≈ 2 billion daily**
- 133 million blogs indexed by Technorati (since 2002)
- Blog posts in a 24 hour period ≈ 900,000 (average number)

Source: Adam Singer, 49 Amazing Social Media, Web 2.0 and Internet Stats. January 12, 2009. http://thefuturebuzz.com/2009/01/12/social-media-web-20-internet-numbers-stats/

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## Just How Much Is Out There?

As of Dec 2010

**Facebook**: **30 billion** pieces of content (link, notes, photos, etc.) shared
> 20 million video
> 3 billion photo per month

**YouTube**: 35 hours of video uploaded/minute

**Flickr**: >5 billion photos
> 3,000 photos are uploaded/minute
= 130 million photos uploaded/month

As of Jan 2009

**Facebook:** 200 million active users
35 different languages
700 million photos added/month

**Twitter:** 1.1 billion Tweets to date

As of Mar 2008

**Twitter:** 3 million Tweets/day

**YouTube:** 70 million videos
200,000 video publishers

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# Lesson 5

## Who's Using Open Source Information?

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## Open Source Customers/Users

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## Who's Using Open Source Information?

"Public Source: Using this public source openly and without resorting to illegal means, it is possible to **gather at least 80% of information about the enemy**. The percentage varies depending on the government's policy on freedom of the press and publication."

Source: Al Qaeda Training Manual Seized in Manchester, England, December 2001

enemy info gathered ≥ 80%

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## Who's Using Open Source Information?

- "…terrorists exploit the Internet for intelligence – gathering and targeting.
- Today, **anyone can go on the Internet and collect information** against key infrastructure and sensitive components.
- Terrorists use these sites to conduct reconnaissance on potential targets **without ever having to put feet on the ground** to conduct surveillance.

Source: House Permanent Select Committee on Intelligence. Al Qaeda: The Many Faces of an Islamist Extremist Threat. June 2006.

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## Who's Using Open Source Information?

**Point - The Enemy is Exploiting too!**

Jihad Media Battalion released a 28-page manual detailing how to use Google effectively to search for information.

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# Lesson 6

## Intelligence Process

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# Intelligence Process

LESSON 6



# Intelligence Process

**Planning and Direction**
- Identify needs and criteria

**Collection**
- Gathering of the raw data and information from various sources

**Processing and Exploitation**
- Evaluating the information's validity and reliability
- Collation
- Data is correlated and converted into a usable and understandable format

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# Intelligence Process

**Analysis and Production**
- Transform the retrieved data and information through integration, evaluation, analysis, and interpretation into a useful and meaningful product, e.g., intelligence
- Establish relationships

**Dissemination**
- Final product, that is readily accessible, is sent to the appropriate people

**Evaluation and Feedback**
- Obtain feedback on the process performed and the products

**Storage and Retention**

**The information requirements are determined by the organization, including specific mechanisms for each step.**

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# Analytic Standards



## U.S. Office of the Director of National Security, Intelligence Community Analytic Standards (ICD 203) IC Analytic Standards

- Objectivity
- Independent of Political Considerations
- Timeliness
- Based on all Available Sources of Intelligence

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## IC Analytic Standards

**Exhibits Proper Standards of Analytic Tradecraft, specifically:**

- Properly describes quality and reliability of underlying sources
- Properly caveats and expresses uncertainties or confidence in analytic judgments
- Properly distinguishes between underlying intelligence and analysts' assumptions and judgments
- Incorporates alternative analysis where appropriate
- Demonstrates relevance to U.S. national security
- Uses logical argumentation
- Exhibits consistency of analysis over time, or highlights changes and explains rationale
- Makes accurate judgments and assessments

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# Lesson 7

## Ethics

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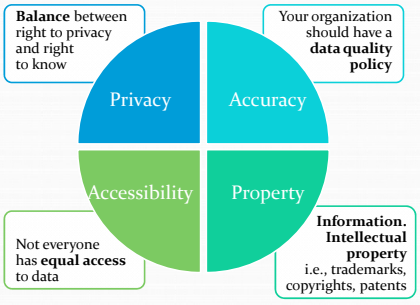
## Ethical Issues

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## Ethics

"Do not misrepresent yourself."

"Do not gather information safeguarded as proprietary or confidential."

Source: Strategic and Competitive Intelligence Professionals. Competitive Intelligence Magazine. Volume 11, Number 2, March-April 2008. Available at www.scip.org/Publications/CIMagIssueDetail.cfm?ItemNumber=2595

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